

Welcome The International Galvanzing Awards 2012 The International Galvanizing Awards recognise the innovative use of galvanized steel by architects, engineers and steel constructors. These awards have been held in conjunction with the industry's global forum – Intergalva 2012. Projects were entered through the national and regional galvanizers associations across the world. In total, 46 projects were entered and the winning project was judged through a voting procedure involving all those associations that submitted entries. Projects were evaluated for their effective and innovative use of galvanizing in architecture and civil engineering, as well as the functionality and aesthetics of the structure. Special attention was also given to demonstration of the contribution of galvanizing to sustainable construction. The entrant's approach towards galvanizing and its incorporation in the design stages was also considered important. This year two projects were identified as joint winners. In addition to the overall winning projects, Highly Commended projects for each country were noted for their excellent use of galvanizing. These projects are presented in this brochure together with the winning projects. They are excellent examples of the growing use of galvanizing in architecture and civil engineering across the world. We hope that they will serve as an inspiration to others.

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18 Acknowledgements

The following galvanizing industry associations have made the 2012 International Galvanizing 20 Awards possible:

American Galvanizers Association 22 Asociación Técnica Española de Galvanización Associazione Italiana Zincatura Czech and Slovak Galvanizers Association 24 European General Galvanizers Association Galvanizers Association of Australia 26 Galvanizers Association of New Zealand Galvazinc Association Hot Dip Galvanizers Association of Southern Africa 28 Industrieverband Feuerverzinken eV Nordic Galvanizers Zinc Info Benelux

This booklet has been produced with the kind support of the International Zinc Association.



2012 Winners

- The International Galvanizing Awards 2012
- AE Hall, Stockholm International Fair, Stockholm, Sweden
- La Porta del Parco Complex of Integrated Services for Culture and Health, Naples, Italy

Nordic Countries

AE Hall, Stockholmsmässan International Fair, Älvsjö, Sweden

2012 Winner

Architects Rosenbergs Arkitekter AB/Alessandro Ripellino

Client

Mässfastigheter AB

Completion Date

2010

The Stockholmsmässan International Fairs in Älvsjö is one of the world's leading organizers of meetings with 10,000 exhibitors and 1.5 million visitors annually. Alessandro Ripellino/ Rosenbergs Architects' latest addition to the premises is a new multifunctional space intended for conferences and large exhibitions - the AE-hall.

The whole building is wrapped in a facade screen comprising approximately 1500 semiperforated galvanized steel panels. They form a giant metallic basket with an embossed effect which is intensified by lighting fixtures that are integrated in the galvanized steel structure.

The hall is connected to the existing complex by a gallery which has also been completely remediated, with new mirror-like ceilings and greenery walls.





Italy

La Porta del Parco – Complex of Integrated Services for Culture and Health, Naples

2012 Winner

Architects

Servizi Integrati-IDI and Silvio d'ASCIA Architect

Client

Società Bagnoli Futura S.p.A di trasformazione urbana

Completion Date 2010

This complex provides 40,000m² of space for a mix of different activities from health/well-being to cultural activities. There are two public squares, a health spa, swimming pool and fitness centre. The complex also includes a 300-seat conference centre, an exhibition centre, bars, offices and shops.

As part of the architects' commitment to sustainable construction, the entire structural steel frame of the main building was galvanized for long-term protection.



hoto credit: Barbara Jodice

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Australia

Manuele Engineers Steel Façade Building, North Plympton, South Australia

Constructors/Client

Manuele Engineers

Completion Date 2010

Manuele Engineers wanted to make a prominent statement about the business they are in by showcasing intricate steel fabrication, enhanced by contrasting hot dip galvanized in-fill panels against a RHS support frame. The durability and maintenance-free nature of hot dip galvanizing on very complex and intricate fabrications will continue to enhance the surrounding environment long into the future by preventing unsightly rust staining.

With a "meccano" type construction of the facade required in order to bring the various components together, very tight tolerances were involved. This was reduced to several millimetres to accommodate a number of the in-fill panels which are able to be hydraulically rotated.







Belgium

RITS Film and Theatre School, Brussels

Architects

Bogdan & Van Broeck Architects

Client

Erasmus University College Brussels

Completion Date

2009

The original cluster of RITS buildings suffered from an almost labyrinthine unstructured nature. There was a need for a more logical circulation pattern. Extensive alterations to the existing buildings have now created a better working environment for teachers and students in a more creative and artistic atmosphere.

Galvanized steel features throughout the project – in particular for the main façades. On the side of the courtyard garden, a large escape staircase was constructed entirely of galvanized steel: a combination of steel mesh flooring and profiles. Within the building all air and cable ducting was left visible and constructed from galvanized steel.







Czech Republic

'Room in the Landscape', Šumava National Park, Modrava

Contractor/Engineers

Šépka architekti

Client Municipality of Modrava

Constructor Jaroslav Prošek, Artistic Metalworker

Completion Date 2010

The demarcation of space in the landscape in the form of a 'room' was a reaction to a request from the municipality of Modrava and the Šumava National Park to create rest places with information for tourists. This first room is located at the confluence of the Streams Modravský and Roklanský from which the River Vydra is created. The walkway of the platform was inspired by the form of a leaf.

Its triangular form creates a structural rigidity that does not require additional transverse bracing. The whole configuration is divided into two squares and nine triangles so that the individual parts could be produced off-site from widely available grating components that are readily hot dip galvanized. This design allows full assembly within a single day.



hoto credit: Ester Havlová



France

Lycée Marcel Sembat, Sotteville-lès-Rouen

Architects

Archi 5 / Jacques Sebbag

Client Regional Council of Haute-Normandie

Completion Date 2011

Galvanized steel has been used extensively in the recent renovation and extension of the Marcel Sembat high school. The school is dedicated to the teaching of automobile mechanics and bodywork. Its new workshops required high ceilings, large volumes and natural indoor lighting.

The architects have restored a unity and a strong and modern visual identity to the school - re-connecting it with its environment. In particular the workshops naturally marry the topography of the park.

The new building begins on the edge of the park and becomes integrated gently into the site by the wavy design of its 8,500 m² vegetated roof -the fourth biggest of its kind in Europe.



Photo credit: Arch



Germany

Galvanized Shell at St Antony, Oberhausen

Architects

ARGE Ahlbrecht-Scheidt-Kaspruch Frank Albrecht, Hermann Scheidt

Structural Engineers

Schülke + Wiesmann

Client

Landschaftsverband Rheinland

Completion Date 2011

Pig iron first flowed from the blast furnace of the St. Antony ironworks in 1758. Today, this first ironworks in the Ruhr region is part of an industrial archaeological park.

The architects have designed a structure to mark the historical significance of the location. Their solution was a minimalist steel roof that both protects yet adds an almost temporary feel to the site. The roof shell lies exposed over the main sections of the archaeological dig where visitors can learn about the ironworks – the 'cradle of the industrial Ruhr'.

The 900 m² shell roof has 323 similar, but not identical, panels which overlap each other like shingles. Due to their double-curved shape and rigidity, the shell is self-supporting and needs no welding. Hot dip galvanizing the steel panels has provided long-term, sustainable corrosion prevention and also creates a lively surface which lends the structure the desired technical charm.



hoto credit: Ahlbrecht-Felix-Scheid



New Zealand

Te Rewa Rewa Bridge

Designer

Novare Design Ltd / Peter Mulqueen

Constructors Webforge (NZ) Ltd

Completion Date 2010

The Te Rewa Rewa Bridge, New Plymouth is a bridge like no other. Its evocative and ethereal style harmonised to its setting has catapulted it to being a potent cultural and community symbol. It has captured the imagination of bridge engineers and architects around the world - as a singly unique blend of both engineering and art.

The bridge's balustrades were galvanized to HDG900 as designated in AS/NZS 2312. Then, after suitable preparation, one coat of matt white epoxy of nominal dry film thickness of 75 microns was applied. A further coat of semi gloss white polyurethane paint of nominal dry film thickness of 50 microns.





The Netherlands

Exposure/Crouching Man

Engineers

Royal Haskoning

Artist Anthony Gormley (UK)

Constructors Had-Fab Ltd (UK)

Client Lelystad

Leiystad

Completion Date 2010 The sculpture 'Exposure' is a steel statue of a man, 25.6 metres high, made of bars and nodes, which sits crouched on the dike in Lelystad and looks out over the Markermeer.

The design had to take into account the specific requirements of the artist, Anthony Gormley. For example, the sculpture had to have an open character, solely made up of isosceles angle steel. The skin comprises irregular polyhedra in which no triangular surfaces or horizontal and vertical bars were allowed to appear. Another requirement was that the artwork must be durable. This is why it is constructed from hot dip galvanized steel.



Photo credit: Allard Bovenberg / Eelco de Winter – Boval Haskonin



South Africa

Cape Town Container Terminal

Main Contractor

WBHO

Steel Fabricator

Scott Steel

Client

Transnet National Ports Authority

Completion Date 2011

As visitors drive into Cape Town on the N1 freeway they pass the Cape Town docks and its new rows of yellow and grey structures for the refrigeration container terminal at Portnet. These structures house refrigerated containers which are stacked 3 high and are connected to the electricity supply at the site. Each unit weighs 10 tonnes and stores 9 refrigerated containers.

The units are directly adjacent to the harbour and in some areas are as close as 20 metres to the sea. The corrosion specification for the structural steel called for hot dip galvanizing followed by a two-coat paint system. This corrosion protection system will have an indefinite lifetime if correctly maintained and if the final paint coat is replaced at reasonable intervals.







Spain

Centro De Tecnificación, Deportiva Embalse Gabriel y Galán, Guijo de Granadilla, Cáceres

Architects

José María Sánchez García

Completion Date 2009 This remarkable project is based on the ring geometry: two concentric circles which connect all the centre's facilities - a peninsula which is itself a magical circle. The building (200m diameter) uses its large scale to reduce the impact on its natural setting. Raised, by up to 4.5m, on stilts, it is floating on the ground and appears to be difficult to perceive among the oaks and pines.





United Kingdom

Roseisle Distillery

Constructors

RIM Fabrications

Architects Austin Smith Lord

Client Roseisle Distillery

Completion Date 2010

Roseisle Distillery in Elgin is Scotland's first major distillery in 30 years and, with a gross internal area of 3,000m², also it's largest, with a potential output of 10 million litres of malt whiskey per year. The building is a modern interpretation of the traditional still house and maximizes natural ventilation and daylight. The layout and massing of the building express whisky-making's three main processes: mashing, fermentation and distilling. Galvanizing has been used throughout the structure of the distillery.



hoto credit: Keith Hunter Photograp



USA

Morris Arboretum – 'Out on a Limb' Adventure, University of Pennsylvania, Philadelphia

Architects

Metcalfe Architecture and Design Alan Metcalfe

Constructors

DDM Steel Company

Client University of Pennsylvania

Completion Date 2009 Weaving like a spider web throughout the verdant canopy of the Morris Arboretum, the hot dip galvanized steel walkways of the "Out on a Limb Adventure" provide a pathway to the treetops for nature enthusiasts. Located just outside of Philadelphia, it was developed to give visitors a bird's-eye view of the forest.

Consisting of a 450-foot long canopy walk constructed around a 250 year-old chestnut oak tree, the hot dip galvanized steel structure overlooks the steeply sloped woods of the Wissahickon Valley. In keeping with the bird's eye theme, visitors can walk into a human-sized bird's nest constructed of galvanized steel and interwoven with branches hovering at a daring 80 feet above the forest floor.



hoto credit: Paul Warchol





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